What is claimed is:

1. A steel sheet comprising:

a ferritic phase comprising ferritic grains and ferritic grain boundaries, said ferritic grains having a grain size number of 10 or more;

at least one kind of precipitate selected from the group consisting of Nb precipitates and Ti precipitates, said at least one kind of precipitate being included in the ferritic phase;

the ferritic grains having a low density region with a low precipitate density in the vicinity of grain boundary; and

the low density region having a precipitate density of 60% or less to the precipitate density at center part of the ferritic grain.

2. The steel sheet of claim 1, wherein the low density region is in a range of from 0.2 to 2.4 μm distant from the ferrite grain boundary.

3. The steel sheet of claim 1, further comprising a BH value of 10 MPa or less.

4. The steel sheet of claim 1, consisting essentially of 0.002 to 0.02% C, 1% or less Si, 3% or less Mn, 0.1% or less P, 0.02% or less S, 0.01 to 0.1% sol.Al, 0.007% or less N, at least one element selected from the group consisting of 0.01 to 0.4% Nb and 0.005 to 0.3% Ti, by mass%, and the balance being Fe.

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5. The steel sheet of claim 4, wherein the C content is from 0.005 to 0.01%.

6. The steel sheet of claim 4, wherein the Nb content is from 0.04 to 0.14%.

7. The steel sheet of claim 4, wherein the Nb content is from 0.07 to 0.14%.

8. The steel sheet of claim 4, wherein the Ti content is from 0.005 to 0.05%.

9. The steel sheet of claim 1, consisting essentially of 0.002 to 0.02% C, 1% or less Si, 3% or less Mn, 0.1% or less P, 0.02% or less S, 0.01 to 0.1% sol.Al, 0.007% or less N, 0.002% or less B, at least one element selected from the group consisting of 0.01 to 0.4% Nb and 0.005 to 0.3% Ti, by mass%, and the balance being Fe.

10. The steel sheet of claim 9, wherein the B content is 0.001% or less.

11. A method for manufacturing the steel sheet according to claim 1, comprising the steps of:

hot-rolling a slab consisting essentially of 0.002 to 0.02% C, 1% or less Si, 3% or less Mn, 0.1% or less P, 0.02% or less

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S, 0.01 to 0.1% sol.Al, 0.007% or less N, at least one element selected from the group consisting of 0.01 to 0.4% Nb and 0.005 to 0.3% Ti, by mass%, and the balance being Fe, to prepare a hot-rolled steel sheet;

cooling the hot-rolled steel sheet to a temperature of 750°C or below at cooling speeds of 10°C/sec or more;

coiling the cooled hot-rolled steel sheet;

cold-rolling the coiled hot-rolled steel sheet to prepare a cold-rolled steel sheet; and

annealing the cold-rolled steel sheet.

12. The method of claim 11, wherein the slab consists essentially of: 0.002 to 0.02% C, 1% or less Si, 3% or less Mn, 0.1% or less P, 0.02% or less S, 0.01 to 0.1% sol.Al, 0.007% or less N, 0.002% or less B, at least one element selected from the group consisting of 0.01 to 0.4% Nb and 0.005 to 0.3% Ti, by mass%, and the balance being Fe.

13. The method of claim 11, wherein the ferritic grains of the coiled hot-rolled steel sheet have 11.2 or more grain size number.

14. The method of claim 11, wherein the step of coiling the hot-rolled steel sheet is carried out at coiling temperatures of from 500 to 700°C.

15. The method of claim 11, wherein the step of cold-rolling the hot-rolled steel sheet is carried out at least 85% of cold

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draft percentage.

16. The method of claim 11, wherein the step of annealing the cold-rolled steel sheet is carried out by continuous annealing at temperatures of from 900°C to recrystallization temperature.

17. A steel sheet consisting essentially of: 0.004 to 0.02% C, 1.0% or less Si, 0.7 to 3.0% Mn, 0.02 to 0.15% P, 0.02% or less S, 0.01 to 0.1% Al, 0.004% or less N, 0.2% or less Nb, by mass%, and the balance being Fe;

the Nb content satisfying a formula of

$(12/93) \times Nb^*/C \geqq 1.0$

where, $Nb^* = Nb - (93/14) \times N$, and

where, C, N, and Nb designate content of respective elements, (mass%); and

yield strength and average grain size of the ferritic grains satisfying a formula of

$YP \leqq -120 \times d + 1280$

Where, YP designates yield strength [MPa], and d designates average size of ferritic grains [μm].

18. The steel sheet of claim 17, wherein an n value determined by 10% or lower deformation in a uniaxial tensile test satisfies a formula of

$n \text{ value} \geqq -0.00029 \times TS + 0.313$

where, TS designates tensile strength [MPa].

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19. The steel sheet of claim 17, wherein the C content is from 0.005 to 0.008%.

20. The steel sheet of claim 17, wherein the Nb content is from 0.08 to 0.14%.

21. The steel sheet of claim 17, further containing 0.05% or less Ti.

22. The steel sheet of claim 17, further containing 0.002% or less B.

23. The steel sheet of claim 17, further containing 0.05% or less Ti and 0.002% or less B.

24. The steel sheet of claim 17, further containing at least one element selected from the group consisting of 1.0% or less Cr, 1.0% of less Mo, 1.0% or less Ni, and 1.0% or less Cu.

25. The steel sheet of claim 17,further comprising a zinc-base coating on the steel sheet.

26. A method for manufacturing steel sheet, comprising the steps of:

hot-rolling a slab consisting essentially of 0.004 to 0.02% C, 1.0% or less Si, 0.7 to 3.0% Mn, 0.02 to 0.15% P, 0.02% or less S, 0.01 to 0.1% Al, 0.004% or less N, 0.035 to 0.2% Nb, by

mass%, and the balance being substantially Fe, at a finishing temperatures of Ar3 transformation point or more;

coiling the hot-rolled steel sheet at temperatures of from 500 to 700°C;

cold-rolling the coiled hot-rolled steel sheet; and

annealing the cold-rolled steel sheet.

27. The method of claim 26, further comprising the step of applying zinc-base coating on the steel sheet after annealed.

28. The method of claim 26, wherein the slab further contains 0.05% or less Ti.

29. The method of claim 26, wherein the slab, further contains 0.002% or less B.

30. The method of claim 26, wherein the slab further contains 0.05% or less Ti and 0.002% or less B.

31. A steel sheet consisting essentially of: 0.0040 to 0.02% C, 1.0% or less Si, 0.1 to 1.0% Mn, 0.01 to 0.07% P, 0.02% or less S, 0.01 to 0.1% Al, 0.004% or less N, 0.15% or less Nb, by mass%, and the balance being substantially Fe;

the Nb content satisfying a formula of

$(12/93) \times Nb^*/C \geqq 1.2$

where, $Nb^* = Nb - (93/14) \times N$, and

where, C, N, and Nb designate content of respective

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elements, (mass%); and

yield strength and average grain size of the ferritic grains satisfying a formula of

$$YP \leqq -60 \times d + 770$$

Where, YP designates yield strength [MPa], and d designates average size of ferritic grains [μm].

32. The steel sheet of claim 31, wherein the C content is from 0.005 to 0.008%.

33. The steel sheet of claim 31, wherein the Nb content is from 0.08 to 0.14%.

34. The steel sheet of claim 31, wherein an n value determined by 10% or lower deformation in a uniaxial tensile test is 0.21 or more.

35. The steel sheet of claim 31, further containing 0.05% or less Ti.

36. The steel sheet of claim 31, further containing 0.002% or less B.

37. The steel sheet of claim 31, further containing 0.05% or less Ti and 0.002% or less B.

38. The steel sheet of claim 31, further containing at least

one element selected from the group consisting of 1.0% or less Cr, 1.0% of less Mo, 1.0% or less Ni, 1.0% or less Cu.

39. The steel sheet of claim 31, further comprising a zinc-base coating on the steel sheet.

40. A method for manufacturing steel sheet comprising the steps of:

hot-rolling a slab consisting essentially of 0.004 to 0.02% C, 1.0% or less Si, 0.1 to 1.0% Mn, 0.01 to 0.07% P, 0.02% or less S, 0.01 to 0.1% Al, 0.004% or less N, 0.035 to 0.15% Nb, by mass%, and the balance being substantially Fe, at finish temperatures of Ar_3 transformation point or above;

coiling the hot-rolled steel sheet at a temperatures of from 500 to 700°C;

cold-rolling the coiled hot-rolled steel sheet;and

annealing the cold-rolled steel sheet.

41. The method of claim 40, further comprising the step of applying zinc-base coating on the steel sheet after annealed.